

 CALIFORNIA AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0619 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2021	MDZXL02.9119	2.925	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Continuous Trap Oxidizer			Off-road Crane, Loader, Tractor, Dozer, Pump, Compressor, Material Handler	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NO _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.2	0.4	0.004	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed on this 19th day of June 2020.



Allen Lyons, Chief
Emissions Certification and Compliance Division

Engine Model Summary Template

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EO# U-R-013-0619
Date: 8/12/2020

Engine Family	1. Engine code	2. Engine Model	3. BHP@RPM (SAE Gross)	mm/stroke @ peak HP (for Diesel only)	(lbs/hr) @ peak HP (for Diesel only)	6. Torque @ RPM (SAE Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lbs/hr) @ peak torque	9. Emission Control Device Per SAE J1930
MDZXL02.9119	C5EI55E	TCD2.9L4	74.3@2200	57	27.8	375@1400	74	23.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI45E	TCD2.9L4	60.3@2200	48	23.4	240@1600	54	19.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI45D	TCD2.9L4	60.3@2300	46	23.5	240@1600	54	19.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI45A	TCD2.9L4	60.3@2600	46	26.5	240@1600	54	19.1	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI50D	TCD2.9L4	67.1@2300	51	26.0	270@1600	60	21.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI55EZ	TCD2.9L4	74.3@2200	57	27.8	300@1600	63	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI55DZ	TCD2.9L4	74.3@2300	56	28.6	300@1600	63	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	* C5EI55D	TCD2.9L4	74.3@2300	56	28.6	375@1400	74	23.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI55AZ	TCD2.9L4	74.3@2600	54	31.1	300@1600	63	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI55A	TCD2.9L4	74.3@2600	54	31.1	375@1400	74	23.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5EI55ES	TCD2.9L4	74.3@2200	57	27.8	260@1600	58	20.6	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5ET45E	TCD2.9L4	60.3@2200	48	23.4	246@1600	55	19.5	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5ET50E	TCD2.9L4	67.1@2200	54	26.3	272@1600	60	21.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5ET55E	TCD2.9L4	74.3@2200	57	27.8	300@1600	63	22.3	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5ET55EA	TCD2.9L4	74.3@2200	57	27.8	375@1400	74	23.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX
MDZXL02.9119	C5ET50EA	TCD2.9L4	67.1@2200	54	26.3	375@1400	74	23.0	DDI,TC,CAC,ECM,EGR,DOC,CTOX

* correct engine code